

**SUPPLEMENTARY TABLE. Difference-in-difference estimates\* of the association between counties with in-person college/university instructional formats and county-level COVID-19 incidence and percent COVID-19 test positivity, matched analysis, 2020**

Analysis description	Outcome variable*:	Daily COVID-19 incidence per 100k persons		Daily COVID-19 incidence per 100k persons (adjusted by college/ university full-time enrollment <sup>†</sup> )			COVID-19 test percent positivity		
		Estimate	p	Estimate	p	Estimate	P		
Matched analysis: University counties matched to comparison counties <sup>¶</sup> with similar population and proximity	After · In Person	14.438	0.000 <sup>§</sup>	10.638	0.000 <sup>§</sup>	2.363	0.001 <sup>§</sup>		
	Observations	5,848		5,848			5,843		

Abbreviations: COVID-19 = coronavirus disease 2019;

\* The coefficient of interest presented in this table is  $\delta_{IP}$ , the coefficient on the regression term *After · In Person*, which captures the difference in outcome before and after the start date among in-person university counties, minus the difference in outcome before and after the assigned start date in nonuniversity counties. The coefficient and regression term are defined in the regression equation specified in footnote †† of the main text. These coefficients capture the difference in outcomes before and after the start date in in-person university counties compared to the before and after the assigned start date of the non-university counties over the same time period. All regressions include fixed effects for states, counties, calendar-week, and day of the week. Standard errors were clustered at the county level.

† For this model, daily incidence after the start date was adjusted by adding the full-time student enrollment size to the county population of each university county.

§ Statistically significant ( $p < 0.05$ ).

¶ Matches for each in-person university county were identified by listing all candidate (county) matches without large colleges or universities that had a similar population size ( $\pm 30\%$ ) and that were located within 500 miles (805 km) of each university county. From these candidate matches, the final match was selected based on closest proximity such that no nonuniversity county was matched more than once. After matching, the average distance between counties in matched in-person university county and nonuniversity county pairs was 114 miles (183 km) with a maximum distance of 471 miles (758 km). Eleven in-person university counties were excluded from the matched analysis because there were no candidate matches meeting population size and proximity specifications. All remote university counties were excluded from the matched analysis because there were an insufficient number of nonuniversity county matches.